Appl. No. 09/737,400   APP 1279
Amdt. Dated May 5, 2004
Reply to Office Action of November 5, 2003

REMARKS/ARGUMENTS

Claims 1-18 remain in this application, with claims 1, 3, 4, 8, 9, 11, 12 and 18 being currently amended and the remaining claims as originally filed.

Claims 1-3, 6, 8-10 and 17 were rejected by the Examiner under 35 U.S.C. 103(a) as being unpatentable over Scholefield et al (US 6216006) and further in view of Hiroshi et al. (EP 0981224 A1). Specifically, the Examiner asserts that in claims 1, 8 and 17 (claims 1 and 8 are the only independent claims in the application), Scholefield teaches a method for reserving resources in a wireless network and Hiroshi teaches monitoring the radio dependent layer resources. The Examiner then concludes that it would be obvious to modify the device of Scholefield et al by specifically adding features in order to enhance system performance of the radio dependent layer resources. Applicants respectfully traverse the Examiner's conclusion, modifying Scholefield et al. with the teachings of Hiroshi et al does not result in applicants' invention.

Applicants' invention addresses a problem that is fundamentally different from the problems addressed by Scholefield et al and Hiroshi et al. and the problems that can be addressed by the combination of the two. In addition, the technical methods taught or suggested by the two references as well as the methods resulting from the combination are also fundamentally different from our invention and hence they cannot solve the problem our invention solves. Specifically, Scholefield et al teaches a method to solve the problem of whether a network that has just received a service request for a call/connection have sufficient bandwidth to support this present service request. This problem is commonly referred to as Admission Control. Admission control is not a method for determining how much resource should be reserved to meet the resource demands of future service requests. It is a method for a network to determine whether it has sufficient resources at the present time to support a present service request already received by the network (as described, for example, in FIG. 1, and in Column 3, lines 9-19). It does so by estimating the effective bandwidth required by this present individual service request, based on information in the service request (Column 3, lines 14-19) received from the mobile terminal and the available bandwidth in the network at the present time. The method in Scholefield et al is triggered only after the network receives a service request from a user (FIG.1). The method then estimates the effective bandwidth required by this present service request and determines if there is sufficient available unused capacity at the present time to support the service request.

To solve the resource reservation problem, the network needs to decide how many resources to set aside for future handoff users before these mobile users actually enter the network, i.e.,

Page 4 of 6

Appl. No. 09/737,400   APP 1279
Amdt. Dated May 5, 2004
Reply to Office Action of November 5, 2003

before the network can communicate with the mobile users. The approach in Scholefield et al
however, cannot do this because it cannot make any decision before the network receives a
service request from a user (e.g., see FIG.1 and Column 3, lines 14-20). Hence, Scholefield et al
cannot be used to solve the problem that our invention solves. There is no mentioning in
Scholefield et al on how its method might be applied to determine the resource demands of future
handoff calls. Although Scholefield et al mentions the term "resource reservation", this term
actually refers to "allocating" the currently available bandwidth to support a service request
already received by the network (column 2 lines 64-67, column 3, lines 1-8).

Scholefield et al also requires the network to receive detailed QoS parameters and their
values regarding every single call before its procedure can even be started (e.g., see FIG.1 and
Column 3, lines 20-25). This is another reason that the method cannot be used to solve the
resource reservation problem that is addressed by our invention, i.e., to determine how much
resource will be needed by users that may move into the network in the future before these users
actually enter the network. This is because, before the users enter the network, it will be generally
impossible for the network to receive a service request from the user and to know what
applications each user will be using and hence what bandwidth will each user require. The
procedure in Scholefield et al (FIG.1, FIG.4) has no way of obtaining such detailed QoS
information that it needs as input regarding the users that have not entered the network and hence
the method taught or suggested in Scholefield et al cannot make any decision regarding how
much resource should be set aside for future handoff users/calls

Hiroshi et al teaches a method to police (control) the parameter values related to the QoS of
an already admitted call so that the traffic generated by the call can be maintained within the
bandwidth allocated to the call in order to prevent waste of resources in the network. Hiroshi et al
describes how such policing functions may be done using local information. It does not provide
any solution to reserve resources for use by future users that may be handed off into the network
in the future, which is the problem addressed by our invention. Traffic control as described in
Hiroshi et al is performed based on declared values (pg 3 lines 1-5). It provides a solution for
appropriate placement of the traffic controller to effectively police traffic admitted into the
network. Our invention does not address the issue of policing the traffic of calls that have already
been admitted into the network but instead considers how to determine what resources should be
set aside to meet the resource demands of the users that may move into the network in the future.

Appl. No. 09/737,400   APP 1279
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Accordingly, the combination of the two references does not result in our invention. Combining the two references will not lead to a method for solving the resource reservation problem that is solved by our invention because Scholefield et al is a method for reserving bandwidth for calls that have been received by the network and Hiroshi et al is a method for managing the resources already allocated for such calls. Neither reference nor their combination teaches or suggests any solution for a network to determine how much resource should be set aside to support users and calls that may enter the network in the future. The combination will result in a method that can be used for admission control and subsequent traffic policing of calls that have already been accepted into the network. However, in order to further clarify the differences between the references and the claimed invention, applicants' have amended the claims to clearly reference the problem being addressed (i.e. reservation of resources for future call traffic) and to more clearly reflect that fact that applicants' method uses the monitored resource value to predict the future needed resources.

Applicants' therefore believe that the present application as amended is patentably distinct over the cited references and Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

Telcordia Technologies, Inc.

By _____
Joseph Giordano
Reg. No. 35158
Tel.: (732) 699-4800